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10/595,896	05/18/2006	Thomas Klein	72233	8699
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DANG, KET D				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/595,896

**Applicant(s)**

KLEIN, THOMAS

**Examiner**

KET D. DANG

**Art Unit**

3742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 February 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 and 18-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 18-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 February 2011 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-845)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This office action is responsive to the amendment filed on February 3, 2011. As directed by the amendment: claims 1, 4-5, 8, 10-12, 14, and 18-20 have been amended, claim 17 has been cancelled and no new claims have been added. Thus, claims 1-16 and 18-21 are presently pending in this application.

#### ***Response to Amendment/Argument***

2. Applicant's arguments filed February 3, 2011 have been fully considered but they are not persuasive.

Applicant's amendments have overcome the drawing objection and substantially 35 U.S.C. 112, second paragraph rejection from previous Office action. There are still some problems with the 35 U.S.C. 112, second paragraph issues after amended claims.

Applicant argues on page 15 of the Arguments/Remarks that the rejection does not establish a prima facie case of obviousness. As pointed out in the Office action, the combination of Haczynski et al. in view of Tsutsumi (EP 1358973 A1) and Suita et al. fully meets all of the claimed invention.

In response to applicant's argument that Suite et al. is about a welding gun, not a electric arc welding, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would

have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The examiner recognizes that obviousness may be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988), *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992), and *KSR International Co. v. Teleflex, Inc.*, 550 U.S. 398, 82 USPQ2d 1385 (2007). In this case, *Suita et al.* teaches the welding gun is coupled to a robot so that the stator is driven by the robot to rotate about the axis of the actuator. Both the stator and the rotor are adjustable in rotational angle about the axis of the actuator (i.e. rotary type actuator). Therefore, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a

reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 18, and 20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The amendment filed February 3, 2011 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: recited "with the welding power cable connected to the stator in a non-rotatable manner". Examiner is unable to find any support for the amendments in the specification. The examiner respectfully requests that applicant direct the examiner to the disclosure for any new recited limitations.

Applicant is required to cancel the new matter in the reply to this Office Action.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-16, 18-19, and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the phrase "can be" at line 3 in the claim renders the claim indefinite for not providing positive limitation. Furthermore, the limitation "at least one of the receiving device" at line 19 in the claim, it is unclear and indefinite to the relationship between "at least one of the receiving device" and "a receiving device" at line 6 in the claim and to whether they are the same or different. Further clarification is required to further differentiate between the two. Examiner interprets it as only one receiving device, not many receiving devices. There is a similar issue with the limitation "at least one of the receiving device" in claim 18.

There is no amended in claim 6 so it should be written as "Previous Amended", not "Currently Amended".

In claim 7, recites the limitation "a stator" at line 4 in the claim renders the claim indefinite. It is unclear for whether this stator is the same as the one recited at line 13 in claim 1. If it is so, then "a" should be replaced with "the" or "said". If it is not, then essential structural cooperative relationships between the two are suggested.

In claim 18, recites the limitation "said flange" at line 5 in the claim. There is insufficient antecedent basis for this limitation in the claim. It is unclear and indefinite to the relationship between "said flange" and "a connection flange rotational axis" at lines

3-4 in the claim and to whether they are the same or different. Further clarification is required to either further differentiate (said flange) or provide proper antecedent basis. There is insufficient antecedent basis for the limitation "the connection flange of the robot arm" at lines 22-23 in the claim. The limitation "connection flange rotational axis" at line 26 in the claim renders the claim indefinite. It is unclear for whether this stator is the same as the one recited at lines 3-4 in the claim. If it is so, then "the" or "said" should be used. If it is not, then essential structural cooperative relationships between the two are suggested.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-16 and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haczynski et al. (US Pat No. 5,866,874) in view of Tsutsumi (EP 1358973 A1) and further in view of Suita et al. (US 5990442).

Regarding claims 1 and 19, Haczynski et al. disclose a fixing device (col. 3, lines 55-56) for attaching the welding torch device 10 (Fig. 1) (Abstract) to the welding robot (Abstract) (col. 1, lines 16-18); a receiving device 26 (Fig. 1) for holding a welding torch 10 (Fig. 1) and for transferring driven rotatory (col. 3, lines 55-56) motions to the welding torch, the receiving device establishing a welding torch rotational axis which is

coaxial with the connection device of the robot arm; an electrical connection for a welding power cable 20 (Fig. 1) (col. 3, lines 42-44), by means of which a robot side of the welding torch device is electrically connected to a welding power source (Fig. 1) (col. 3, lines 44-47); a current transfer device 22 (fig. 1), via which the welding power cable 20 (Fig. 1) (col. 3, lines 42-44) is electrically connected to a welding torch 10 (Fig. 1) side of the welding torch device, an essentially centric leadthrough, through which expendable supply material (col. 3, lines 40-66) required for the welding process is guided in the direction of the receiving device 26 (Fig. 1); and at least one of the receiving device 26 (Fig. 1) and the fixing device are connected to the stator in an electrically conductive manner by means of an electric contact means (col. 5, lines 60-64); and wherein an introduction of supply material into the welding torch the leadthrough is coaxial 14 (fig. 1) arranged in the welding torch device and has a recess with a longitudinal axis which is in alignment with a rotational axis of the connection device (col. 3, lines 60-66; col. 4, lines 6-52; col. 6, lines 37-62).

With respect to claims 2-7, Haczynski et al. disclose wherein a longitudinal axis (See Figure 3) of the leadthrough is aligned with the rotational axis of the connection device (col. 4, lines 6-52; col. 6, lines 37-62); a leadthrough of the receiving device for welding wire (col. 4, line 31-34) for the welding torch 10 (Fig.1), whereby the leadthrough of the stator and the leadthrough of the receiving device 26 (Fig.1) run at least essentially coaxially to one another; wherein: the connection device comprises a connection flange on the robot side; a longitudinal axis (col. 4, lines 11-15) of a recess of the leadthrough of the stator assembly runs at least essentially coaxially to a



rotational axis of the rotatory motion of the connection flange 9 (Fig. 1) on the robot side or to rotational axis of rotatory motion of the connection device (col. 6, lines 37-62); wherein: the electrical connection for the welding power is lead through the fixing device with which the welding torch device is attachable to the connection device of the robot, whereby the rotational axis with which the rotor is rotatable is at least essentially aligned to the rotational axis of the connection device (col. 3, lines 40-59); a common rotational axis of the fixing device (col. 3, lines 55-56), the receiving device runs coaxially to a longitudinal axis (col. 4, lines 11-15) of the leadthrough of the stator; further comprising insulating medium, which electrically insulates (col. 3, lines 37-39) the fixing device from the stator, whereby the stator and the receiving device 26 (Fig. 1) are connected to one another in an electrically conductive manner by means of a stator to receiving device contact means.

With respect to claims 15-16, Haczynski et al. disclose the claimed invention and wherein the leadthrough is provided with a recess through which both welding wire (col. 4, lines 31-34), and inert gas (col. 1, lines 20-24) is fed to the welding torch 10 (Fig. 1) as the expendable supply material (col. 3, lines 40-66); wherein the electric connection for the welding power cable 20 (Fig. 1) (col. 3, lines 42-44) is part of a wall defining the recess.

With respect to claims 18 and 20, Haczynski et al. disclose a welding robot for welding workpiece, the welding robot comprising: a folding arm robot provided with a connection flange having a connection flange rotational axis; and a welding torch device connected to said flange, said welding torch device comprising a fixing device

(col. 3, lines 55-56) for attaching the welding torch device 10 (Fig. 1) (Abstract) to the welding robot (col. 1, lines 16-18); a receiving device 26 (Fig. 1) for holding a welding torch, having a welding torch rotational axis that is coaxial with the connection flange rotational axis, and for transferring driven rotatory motions to the welding torch, an electrical connection for a welding power cable 20 (Fig. 1) (col. 3, lines 42-44), by means of which a robot side of the welding torch device (col. 2, lines 25-26) is electrically connected to a welding power source 22 (Fig. 1) (col. 3, lines 44-47), a current transfer device, via which the welding power cable is electrically connected to the welding torch side of the welding torch device, wherein the current transfer device has stator, which is provided for a rotational fixed arrangement in relation to the robot arm, but is rotated in relation to the connection flange on the welding robot side, the welding power cable being connected to the stator in a non-rotatable manner, the stator including an essentially centric leadthrough, through which expendable supply material (col. 3, lines 40-66) required for a welding process is guided in the direction of the receiving device 26 (Fig. 1); and the receiving device and the fixing device is connected to the stator in an electrically conductive manner by means of an electric contact means (col. 5, lines 60-64); the fixing device (col. 3, lines 55-56) of the rotor, being designed for attaching to the connection device of the robot.

Haczynski et al. fail to disclose wherein the current transfer device has a stator, which is provided for the rotationally fixed arrangement in relation to the robot arm, but is rotated in relation to the connection device on the welding robot side; wherein the receiving device and the fixing device are embodied as rotors, which, as a result, are

rotatable in relation to the stator; and a rotational axis of the rotor is at least essentially aligned with the rotational axis of the connection device of the robot and the rotor is rotated about the rotational axis as well as about the stator; the stator being an inner stator which is surrounded by the rotor as an outer rotor with the stator led through the connection device of the robot arm; a arm robot provided with a connection flange/device; a rotor arrangement; wherein the current transfer device has a stator, which is provided for the rotationally fixed arrangement in relation to the robot arm, but can be rotated in relation to the connection flange on the welding robot side; wherein the receiving device and the fixing device are embodied as rotors, which, as a result, are rotated in relation to the stator; and a rotational axis of the rotor is at least essentially aligned with the rotational axis of the connection device of the robot and the rotor is rotated about the rotational axis as well as about the stator assembly; the stator being an inner stator which is surrounded by the fixing device rotor as an outer rotor.

However, Tsutsumi teaches wherein the current transfer device has a stator 1 (Fig. 1) (abstract), which is provided for the rotationally fixed arrangement in relation to the robot arm (Page 2, paragraphs 0002 and 0009), but is rotated in relation to the connection device on the welding robot side; wherein the receiving device and the fixing device are embodied as rotors 6 (Fig. 1), which, as a result, are rotated in relation to the stator 1 (Fig. 1) (Page 6, paragraph 0045); and a rotational axis of the rotor (Page 4, paragraph 0024) is at least essentially aligned with the rotational axis of the connection device of the robot and the rotor is rotated about the rotational axis as well as about the stator. Tsutsumi also teaches arm robot (Page 2, paragraphs 0002 and 0009) provided

with a connection flange 9 (Fig. 1); a rotor arrangement (paragraphs 0002, 0009, and 0016); wherein the current transfer device has a stator 1 (Fig. 1), which is provided for the rotationally fixed arrangement in relation to the robot arm (Page 2, paragraphs 0002, and 0009), but is rotated in relation to the connection device on the welding robot side; wherein the receiving device and the fixing device are embodied as rotors 6 (Fig. 1), which, as a result, are rotated in relation to the stator (Page 2, paragraphs 2 & 9); and a rotational axis (Page 4, paragraph 0024) of the rotor is at least essentially aligned with the rotational axis of the connection device of the robot and the rotor 6 (Fig. 1) is rotated about the rotational axis as well as about the stator assembly (1 (Fig.1).

With respect to claims 8-13, Tsutsumi teaches wherein the stator 1 (Fig. 1) to receiving device contact means has elements, which are rotated together (Page 6, paragraph 0045) with the rotor 6 (Fig. 1) about an axis, whereby rotational axes (Page 4, paragraph 0024) of the elements are aligned with the rotational axis of the connection device of the robot (Page 2, paragraphs 0002 and 0009); wherein the contact means is embodied as a sliding contact means 26 (Fig. 1) (Paragraph 33); further comprising a force means (Page 5, paragraph 0033), with which at least one said sliding contact element (Page 5, paragraph 0033) of the sliding contact means is pressed against a contact partner; another force means and another contact partner wherein two force 48 (two sides Fig. 1) means and two contact partners are provided, with which the at least one sliding contact element 26 (Fig. 1) is pressed against contact partners in the axial and radial directions in relation to the axis of the rotatory motion (Page 4, paragraph 0024); wherein the force means are springy 48 (Fig. 1) (Paragraph 52), and the at least

one sliding contact element 26 (Fig. 1) is pressed against both a first contact partner radially surrounding the leadthrough; and a second contact partner axially offset to the sliding contact element 26 (Fig. 1); a bell-shaped section of the stator 1 (Fig. 1), in which the sliding contact means 26 (Fig. 1) is arranged. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the Haczynski's reference, to include rotational axis, sliding contact means, and springy as suggested and taught by Tsutsumi, for the purpose of reducing the sliding friction of near by elements (Page 2, paragraph 0005).

With respect to claim 14, Tsutsumi teaches insulating medium 49 (Fig. 2) (Page 6, paragraph 0041), by means of which the fixing device is electrically insulated against the current transfer device

With respect to claim 21, Tsutsumi teaches wherein the stator 1 (Fig. 1) has a rotationally fixed electric connection (Page 4, paragraph 0024) for the welding cable 25 (Fig. 1), through which the rotational axis of the connection device runs whereby the electrical connection is arranged within the stator (paragraphs 0003 and 0032).

Similarly, the stator being an inner stator which is surrounded by the rotor as an outer rotor is known in the art. Suita et al., for example, teaches the stator 16 (fig. 1) being an inner stator which is surrounded by the rotor 17 (fig. 1) as an outer rotor (see figure 1; abstract; col. 4, lines 3-16). Suita further teaches such a configuration provides a means to allow the rotor to move relative to the workpiece (col. 2, lines 35-38).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the Haczynski's reference, to include flange, a

stator, a rotor, and rotational axis as suggested and taught by Tsutsumi, for the purpose of improving structure of robot welding components (Page 2, paragraph 0008) thereby enabling passing different electric signals. Similarly, it would have been obvious to one of ordinary skill in the art to modify Haczynski with the features above of Suita in order to allow the rotor to move relative to the workpiece.

### ***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KET D. DANG whose telephone number is (571) 270-7827. The examiner can normally be reached on Monday - Friday, 7:30 - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoang Tu can be reached on (571) 272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KET D DANG/  
Examiner, Art Unit 3742  
April 19, 2011

/Henry Yuen/  
Supervisory Patent Examiner,  
TC 3700